

# Niskoalkoholowe ciemne

- Gravity **7.8 BLG**
- ABV **3 %**
- IBU **16**
- SRM **20.2**
- Style **Schwarzbier**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **2.5 %**
- Size with trub loss **12.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.5 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **5.6 liter(s)**
- Total mash volume **7.2 liter(s)**

## Steps

- Temp **70 C**, Time **60 min**

## Mash step by step

- Heat up **5.6 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **14.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	1 kg (62.5%)	79 %	16
Grain	Strzegom Pilzneński	0.3 kg (18.7%)	80 %	4
Grain	Jęczmień palony	0.15 kg (9.4%)	55 %	985
Grain	Weyermann - Carapils	0.1 kg (6.3%)	78 %	4
Grain	Caraaroma	0.05 kg (3.1%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	5 g	60 min	11 %
Boil	Tettnang	10 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM56 Wozem jestem	Ale	Slant	200 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min